

R-585-8-7-20

SITE INSPECTION OF
SOUTHERN DIE CASTERS
PREPARED UNDER

TDD NO. F3-8701-03
EPA NO. PA-1995
CONTRACT NO. 68-01-7346

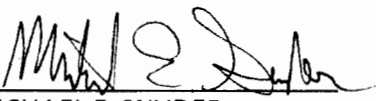
FOR THE

HAZARDOUS SITE CONTROL DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

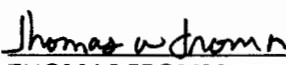
OCTOBER 16, 1987

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY


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ORIGINAL
(Red)

SECTION 1

1.0 INTRODUCTION

1.1 Authorization

NUS Corporation performed this work under Environmental Protection Agency Contract No. 68-01-7346. This specific report was prepared in accordance with Technical Directive Document No. F3-8701-03 for the Southern Die Casters site located in Shrewsbury Township, York County, Pennsylvania.

1.2 Scope of Work

NUS FIT 3 was tasked to conduct a site inspection at the Southern Die Casters site in Shrewsbury Township, Pennsylvania.

1.3 Summary

The subject site is an active aluminum/zinc die casting facility located on approximately three acres in Shrewsbury Township, York County, Pennsylvania. The facility is one of three companies that occupies a small industrial park. The other two are AMP and Southwire.

In 1984, 1,1,1-trichloroethane (1,1,1-TCEA) contamination was identified in the groundwater well that services the AMP and Southwire facilities. Sampling efforts, conducted by the Pennsylvania Department of Environmental Resources (PA DER) in 1985, revealed concentrations of 300 ppb 1,1,1-TCEA in the AMP and Southwire well, and 16 ppb 1,1,1-TCEA in the well servicing Southern Die Casters. Sampling of an additional well installed south of the AMP facility, sometime during 1985, revealed the presence of 1,420 ppb 1,1,1-TCEA. This well was never fully developed and has remained inactive to date.

A preliminary assessment of the Southern Die Casters (SDC) facility was conducted by PA DER in February 1986. During the site visit, Ronald Ayres, president of SDC, reported using 1,1,1-TCEA regularly for parts washing until June 1984. Currently, SDC uses approximately five gallons every three months for miscellaneous degreasing activities. Mr. Ayres has claimed that all waste 1,1,1-TCEA was properly disposed by manifested shipment; however, adequate documentation has not been provided to date. PA DER reported that three manifests were located and reviewed during the preliminary assessment site visit; quantities were not noted in the report. The preliminary assessment report also indicates that "due to the disorganized nature of the files, other (manifests) may be present but were not located."^{1,2}

In addition, it has been reported that the members of the industrial park utilized private septic systems until sometime in late 1983, when public sewage was provided. SDC also reported not having floor drains until that time.²

Currently, SDC, AMP, and Southwire all provide bottled water to their employees for drinking purposes. The wells servicing the facilities are still used for hand washing and sanitary purposes. Residents located within the immediate vicinity of the site rely on private wells and springs for potable water.

FIT 3 conducted the site investigation on February 11, 1987. Activities included sampling on- and off-site groundwater and on-site soils. The results of sampling, as shown in section 7 and discussed in section 8, have verified 1,1,1-TCEA contamination of off-site groundwater; however, only trace amounts of 1,1,1-TCEA soil and groundwater contamination have been found on site.

ORIGINAL
(Red)

SECTION 2



2.0 THE SITE

2.1 Location

Southern Die Casters Corporation is located in South Industrial Park, just east of Route 83 in Shrewsbury Township, York County, Pennsylvania. The latitude coordinates are 76° 39' 40" and the longitude coordinates are 39° 45' 40". To locate the site on the Glen Rock quadrangle, starting at the most southeastern corner, measure five inches west and 1-3/4 inches north. A site location map can be found in appendix B, figure 1.^{2,4}

2.2 Site Layout

The site consists of one building situated on the central portion of three acres of land. To the north of the facility, the property is paved and used as a parking lot. To the east, west, and south of the facility, the grounds are grass covered, with the exception of a small paved area located adjacent to the southwestern corner of the building, which is used to store 55-gallon drums of waste zinc/aluminum powder. Approximately 20 drums were observed at this location during the NUS FIT 3 site inspection. The drums sit directly on the pavement in a single tier and are in good condition, with minor exterior rust. They are held by the company for three to five months.⁵ A paved access road, leading to the southeastern corner of the building from the road entering the industrial park, was also observed. A stack of wooden pallets was located near the building along this road. Between the drum storage area and the stacked pallets, in front of the plant's bay doors, is an area of no vegetation; the area is characterized by tire tracks and ruts in the mud. A small drainage swale is located north of this road; it discharged into another drainage swale that was located along the roadway leading into the industrial park.³ (See site sketch, appendix B, figure 2.)

Areas designated in the PA DER preliminary assessment as the old vegetation kill area, the old drum storage area, and the former septic field area were not precisely located, due to the grass cover, but were estimated and appear on the sample location map (appendix B, figure 3) as sample locations 4, 3, and 1, respectively.³

The property is bordered by Route 83 to the west, Tolna Road to the north, the industrial park access road to the east, and a steep embankment to the south. The property is unfenced.³

2.3 Ownership History

The property is owned by Vernon Caldwell, who has leased the land to Southern Die Casters since sometime during the early 1970s. Prior to 1970, ownership history is unknown.¹

2.4 Site Use History

Since the early 1970s, when the owner built the building and leased the property to Southern Die Casters, the facility has been used for manufacturing zinc/aluminum alloy die casts. Prior to that time, the property had been used for agricultural purposes.¹

2.5 Permit and Regulatory Action History

No permits have been issued to or held by the facility. Other than the preliminary assessment site visit by PA DER and the NUS FIT 3 site inspection, no regulatory action has taken place for the subject site.^{1,2,3}

2.6 Remedial Action to Date

No remedial action has taken place at the subject site; however, when public sewage became available in 1983, the facility abandoned its private septic system and began utilizing the public system.^{1,2,3}

3.2 Surface Waters

Surface water drainage from the site enters a small unnamed tributary, located approximately 400 feet north of the site. This tributary flows eastwardly and enters Deer Creek approximately 3,800 stream feet to the east; the site is located approximately 3/4 mile east of the site. Deer Creek is a tributary to the Susquehanna River, which is located outside of the study area.^{3,4}

Deer Creek is considered by the state of Pennsylvania to be a protected cold water fish habitat, but it is not a stocked stream. Other than fishing, no other uses of Deer Creek have been documented.⁹

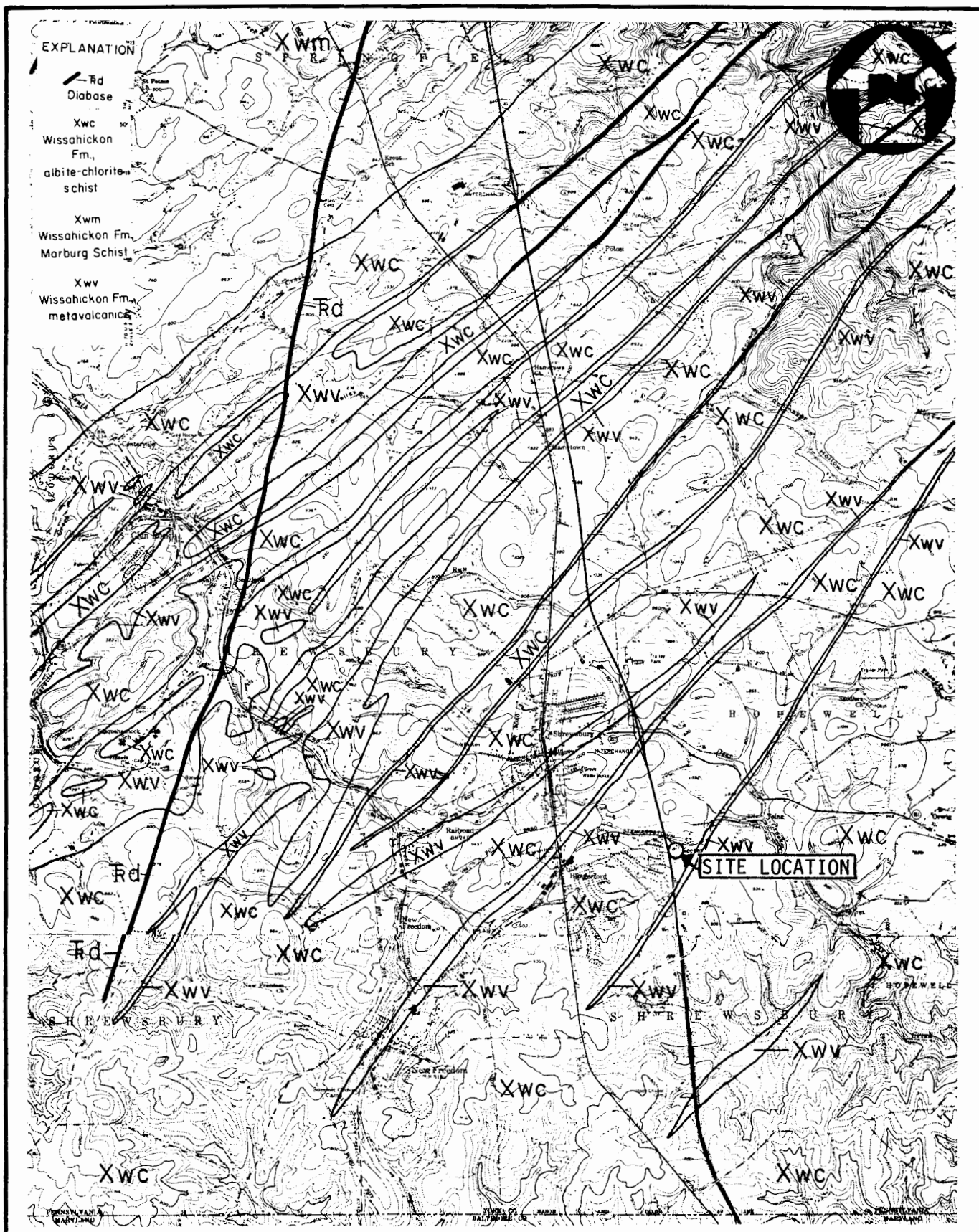
No municipal surface water intakes have been identified within a 3-mile radius of the site; however, the nearest private residence to the site, located approximately 400 feet northwest of the site, utilizes a spring for a potable water source.^{3,6,7,8}

3.3 Hydrogeology

3.3.1 Geology

The Southern Die Casters site is in the Upland Section of the Piedmont Physiographic Province of Pennsylvania. The geology of the Upland Section pertaining to the site and the area within a three-mile radius around it is structurally complex; the rocks within it have been subjected to severe and recurring stress over time. It can be broadly characterized as consisting of Lower Paleozoic metamorphic rocks, primarily schists, that generally strike northeast to southwest parallel to the regional tectonic trend.¹⁰

The site has been mapped as being underlain by blue-green albite-chlorite-muscovite-quartz schist of the Wissahickon Formation of probable Lower Paleozoic age (see figure 3-1, page 3-3). Thin parallel bands of infolded metabasalt of the Wissahickon Formation also crop out within a three-mile radius of the site (see figure 3-1, page 3-3). An outcrop of infolded metabasalt has been mapped less than 1/4 mile southeast of the site. The metabasalt is lithologically described as altered basaltic flows, which are green schistose, and contain hornblende, epidote, chlorite, and quartz. The thicknesses of the albite-chlorite-muscovite-quartz schist and the metabasalt are not known.¹⁰



Source: Atlas of Preliminary Geologic Quadrangle Maps of PA

GEOLOGIC MAP
SOUTHERN DIE CASTERS SITE
SHREWSBURY TWP., YORK CO., PA

Scale 1:62,500

FIGURE 3-1



The Wissahickon Formation is part of the Martic overthrust block, which includes the southern 3/5 of central and southern York County. No large-scale faults have been mapped within a three-mile radius of the site.¹⁰

A weathered zone of unconsolidated rock overlies more competent bedrock of the Wissahickon Formation. The upper part of the weathered zone grades from soil and decomposed rock to a crumbly, gravel-like material of in situ sand to boulder-size rock in a clayey matrix. The thickness of this unconsolidated material, based on the depths to which wells constructed in the Wissahickon Formation are cased, is approximately 15 to 110 feet.¹⁰

3.3.2 Soils

The soil mantling the site has been mapped as Chester silt loam, three to eight percent slopes (ChB) (see figure 3-2, page 3-5). The Chester Series of soils consists of deep, nearly level to moderately sloping, well-drained soils on uplands. The parent material of Chester soils weathered from the underlying schist. A typical profile of Chester silt loam is presented below.¹¹

- A_p: 0 to 11 inches, dark-brown silt loam; weak, fine, granular structure; friable; abrupt, smooth lower boundary; 9 to 12 inches thick.
- B₂₁: 11 to 17 inches, strong brown silty clay loam; weak, fine and medium, subangular blocky structure; friable; gradual, wavy lower boundary; 5 to 9 inches thick.
- B₂₂: 17 to 23 inches, strong brown silty clay loam; weak, fine, subangular blocky structure; thin, discontinuous clay films on ped faces; friable; gradual, wavy lower boundary; 4 to 9 inches thick.
- B₂₃: 23 to 28 inches, strong brown fine silt loam; weak, fine, subangular blocky structure; thin, discontinuous clay films on ped faces; friable; clear, wavy lower boundary; 3 to 7 inches thick.
- B₃: 28 to 36 inches, strong brown micaceous silt loam; weak, fine and medium, subangular blocky structure; friable; abrupt, wavy lower boundary; 6 to 10 inches thick.



EXPLANATION

ChB- Chester silt loam, 3 to 8 percent slopes
 ChC2- Chester silt loam, 8 to 15 percent slopes,
 moderately eroded

Source: Soil Survey of York County, Pennsylvania

SOIL MAP FOR SOUTHERN DIE CASTERS SITE
 SHREWSBURY TWP., YORK CO., PA

Scale 1:20,000

FIGURE 3-2



- C₁: 36 to 40 inches, reddish-brown micaceous loam; weak, subangular blocky structure grading downward to thin, platy structure; friable; clear, wavy lower boundary; 2 to 8 inches thick.
- C₂₁: 40 to 48 inches, strong-brown saprolite; weak, thin, platy structure; friable; gradual, wavy lower boundary; 6 to 14 inches thick.
- C₂₂: 48 to 60 inches, strong-brown (7.5 YR 5/8) saprolite; moderate, thin, platy structure; 10 to 20 inches thick.
- D_r: more than 60 inches, Wissahickon schist.

The construction of buildings and roads at the site has caused some disturbance of the soils.

3.3.3 Groundwater

The occurrence and movement of groundwater in the crystalline rocks of the Wissahickon Formation are primarily along planes of cleavage and schistosity and along fractures such as joints. Intergranular groundwater flow occurs only within unconsolidated rock material of the weathered zone above more competent bedrock.¹⁰

The permeability of more competent bedrock of the Wissahickon generally depends on the number of openings per unit area, the size of the openings, and the interconnection of openings. The distribution and development of cleavage, schistosity, and fractures is principally a function of the structural history of the bedrock. Relatively high permeabilities (as well as storage capacities) often occur in the transmissional part of the weathered zone where regolith meets solid rock. In this part of the weathered zone, openings have been enlarged by the weathering process, but decomposition is incomplete and openings are not plugged with clay. Above solid rock within the transitional part of the weathered zone, the permeability of the regolith is generally low to moderate. The permeability of solid rock with depth usually decreases as the effects of weathering decrease and openings become constricted by compression.¹⁰

Recharge to the regolith is directly through precipitation that infiltrates and percolates downward under the force of gravity. In turn, the regolith recharges underlying bedrock. The flow of groundwater within regolith and the upper portion of bedrock is most likely under water-table conditions. With depth, the flow of groundwater within bedrock may become semi-confined.¹⁰

Water-bearing zones in the Wissahickon are reported to occur consistently between land surface and a depth of approximately 400 feet. The specific-capacity data on the Wissahickon Formation indicate that the Wissahickon is one of the most productive aquifers in central and southern York County. The yield of the average well constructed in the Wissahickon would probably be 30 gallons per minute (gpm) after pumping 24 hours. One of 4 wells drilled 400 feet would yield 80 gpm after pumping 24 hours. The maximum yield reported for a well constructed in the Wissahickon Formation is 150 gpm.¹⁰

3.4 Climate and Meteorology

The local climate is typified by moist, warm air most of the year. The average yearly temperature in this area is approximately 52.7°F, with ranges from 75.2°F in July to 30.2°F in January. Annual rainfall is approximately 40 inches and the net annual precipitation is approximately 7 inches. The average annual lake water evaporation is approximately 33 inches. The 24-hour rainfall is approximately 2.5 inches.^{12,13}

3.5 Land Use

The Southern Die Casters facility is one of three industries currently occupying the Southern Industrial Park. The majority of the undeveloped area of the park lies to the southeast of the site.

Route 83 borders the site to the west and beyond Route 83 is a small housing development. Other populated areas in the study area include Hungerford, located 3/4-mile west of the site, Shrewsbury, one mile northwest of the site, Railroad, 1-1/2 miles west of the site, and New Freedom, located two miles southwest of the site.^{2,3,4}

The remaining land within the study area is used for agricultural purposes and is sparsely populated.^{3,4}

3.7 Critical Environments

According to the United States Department of the Interior, Fish and Wildlife Service, there are no known critical environments or endangered species located within a three-mile radius of the site.¹⁴

11/11/82
11/11/82

SECTION 4

4.0 WASTE TYPES AND QUANTITIES

According to the PA DER preliminary assessment, Southern Die Casters reported using 1,1,1-TCEA regularly for parts washing until June 1984. Currently, SDC uses approximately five gallons every three months for miscellaneous degreasing activities. PA DER reported reviewing waste shipment manifests during the preliminary assessment site visit; however, quantities were not noted in the report.²

The only other waste produced at the facility is a nonhazardous zinc/aluminum powder. The facility produces approximately 10,000 pounds per year. The waste is drummed and stored outside at the southwestern corner of the plant. According to Mr. Ayres, president of SDC, the waste is picked up every three to five months by the company that sells SDC raw zinc/aluminum feedstock and is reprocessed by that company for reuse.^{1,5}

SECTION 5

5.0 FIELD TRIP REPORT

5.1 Summary

On Wednesday, February 11, 1987, NUS FIT 3 staff members Michael Snyder, Paul Dietrich, Audrey Fleisher, Elizabeth Coughlin, Charles Salomon, and Joseph Garzio conducted a site inspection of the Southern Die Casters site, located in Shrewsbury Township, York County, Pennsylvania.

NUS FIT 3 met with Brian Ayres, the site representative, who accompanied the team during a site walk prior to the sampling activities.

Weather conditions during the site visit were partly cloudy, with temperatures ranging from 30°F to 35°F.

5.2 Persons Contacted

5.2.1 Prior to Field Trip

Ronald Ayres
President
Southern Die Casters, Incorporated
Southern Industrial Park
Box 158
Shrewsbury, PA 17361
(717) 235-4805

Harold M. King
King and Sanders Cambria Corporation
13408 Jarrettsville Pike
Phoenix, MD 21131
(301) 666-0449

John McCullough
AMP, Incorporated
Industrial Drive and Tolna Road
Southern Industrial Park
Shrewsbury, PA 17361
(717) 235-7522

Frank Fair
Operations Supervisor
PA DER Bureau of Solid Waste
Management
Harrisburg, PA 17110
(717) 657-4585

5.2.2 At the Site

Brian Ayres, Site Representative
Ronald Ayres, President
Southern Die Casters, Incorporated
Southern Industrial Park
Box 158
Shrewsbury, PA 17361
(717) 235-4805

David Runkle
AMP, Incorporated
Industrial Drive and Tolna Road
Southern Industrial Park
Shrewsbury, PA 17361
(717) 235-7522

EPA Number PA-1995

3

Site Name Southern Die Casters

[illegible]

5.4 Site Observations

- The HNU background reading was 0.4 ppm; no readings above background were recorded.
- The mini-alert was set on the X1 position; no readings above background were recorded.
- During the site reconnaissance conducted by FIT 3 prior to sampling activities, two areas previously identified by the PA DER preliminary assessment could not be pinpointed. The areas are identified by PA DER as the "old vegetation kill" area and the "old drum storage" area. After discussing the locations with Brian Ayres, the locations were approximated.
- The area of "no vegetation," as noted by the PA DER preliminary assessment, was observed. The area was located adjacent to a bay access door utilized by the facility. Brian Ayres indicated that trucks often parked at this area and, when conditions were muddy, the grass was dug up. This area of no vegetation was characterized by tire tracks and ruts. A surface soil sample was not obtained at this location.
- The "new well," located upslope from the AMP facility, had been identified in the PA DER preliminary assessment as a water supply well. Upon FIT 3's arrival at the AMP facility, David Runkle, of AMP, Incorporated, informed FIT 3 that this well was never used as a water supply and does not contain a pump. Lacking the proper sampling equipment, the FIT did not sample the well.
- Representatives of Southern Die Casters and AMP reported utilizing bottled water for drinking purposes; however, both reported using their water supplies for hand washing and sanitary purposes.
- Three private residential water supplies were sampled. The nearest residential supply that was sampled was located approximately 400 feet northeast of the site. All residents whose supplies were sampled reported utilizing their water supplies for drinking, as well as other domestic uses. No residents reported taste, odor, or other problems.
- During a conversation between Michael Snyder and David Runkle, Mr. Runkle indicated that possible sources of contamination may include a dumping area utilized by local residents and a truck stop/rest area. Both areas are located at the southern end of the industrial park, upslope of the industries (see photograph no. 3 and site sketch, appendix B, figure 2).



**POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS**

I. IDENTIFICATION

01 STATE PA	02 SITE NUMBER 1995
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II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION 02 ☒ OBSERVED (DATE: 2/11/87) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 91 04 NARRATIVE DESCRIPTION

Samples obtained from a nearby well has revealed concentrations of trichloroethene, 1,1-dichloroethene and 1,1,1-trichloroethane. Samples obtained from the on-site well has revealed concentrations of lead and copper. Prior to 1984 approximately 91 persons utilized the wells for drinking

01 ☐ B. SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

None reported or observed

01 ☐ C. CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

None reported or observed

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

None reported or observed

01 ☐ E. DIRECT CONTACT 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

None reported or observed

01 ☐ F. CONTAMINATION OF SOIL 02 ☐ OBSERVED (DATE: 2/11/87) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: unknown 04 NARRATIVE DESCRIPTION
(Acres)

Soil samples obtained from two areas on-site have revealed trace amounts of benzene, chlorobenzene, toluene and styrene.

01 ☐ G. DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE: 2/11/87) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 91 04 NARRATIVE DESCRIPTION

Samples obtained from a nearby well revealed concentrations of trichloroethene, 1,1-dichloroethane and 1,1,1-trichloroethane. Samples obtained from the on-site well revealed concentration of lead and copper. Prior to 1984 approximately 91 persons utilized the wells for drinking.

01 ☐ H. WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: 2/11/87) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 91 04 NARRATIVE DESCRIPTION

Prior to 1984 approximately 91 persons utilized the wells for drinking

01 ☐ I. POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 91 04 NARRATIVE DESCRIPTION

Prior to 1984 approximately 91 persons utilized the wells for drinking

ORIGINAL
(R&M)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
PA 1995

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION02 ☐ OBSERVED (DATE: _____)☐ POTENTIAL☒ ALLEGED

An "old vegetation kill" area has been identified in the PA DER preliminary assessment. - Reportedly, unknown material was dumped behind the building.

01 ☐ K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION (Include name(s) of species)02 ☐ OBSERVED (DATE: _____)☐ POTENTIAL☐ ALLEGED

None reported or observed

01 ☐ L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION02 ☐ OBSERVED (DATE: _____)☐ POTENTIAL☐ ALLEGED

None reported or observed

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES
(Spills, Runoff, Standing liquids, Leaking drums)02 ☐ OBSERVED (DATE: _____)☐ POTENTIAL☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 30

04 NARRATIVE DESCRIPTION

An "old vegetation kill" area has been identified in the PA DER preliminary assessment. Reportedly, unknown material was dumped behind the building. Approximately 30 people are employed on site.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION02 ☐ OBSERVED (DATE: _____)☐ POTENTIAL☐ ALLEGED

None reported or observed

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION02 ☐ OBSERVED (DATE: _____)☐ POTENTIAL☐ ALLEGED

None reported or observed

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION02 ☐ OBSERVED (DATE: _____)☐ POTENTIAL☐ ALLEGED

An "old vegetation kill" area has been identified in the PA DER preliminary assessment. Reportedly, unknown material was dumped behind the building.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None

III. TOTAL POPULATION POTENTIALLY AFFECTED: 91

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

PA DER Preliminary Assessment for Southern Die Casters, February 6, 1986
NUS FIT 3 Site Investigation TDD No. F3-8701-03, Sample Analyses - site visit.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
PA 1895

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
<input type="checkbox"/> A. NPDES				
<input type="checkbox"/> B. UIC				
<input type="checkbox"/> C. AIR				
<input type="checkbox"/> D. RCRA				
<input type="checkbox"/> E. RCRA INTERIM STATUS				
<input type="checkbox"/> F. SPCC PLAN				
<input type="checkbox"/> G. STATE (Specify)				
<input type="checkbox"/> H. LOCAL (Specify)				
<input type="checkbox"/> I. OTHER (Specify)				
<input checked="" type="checkbox"/> J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT (Check all that apply)	05 OTHER
<input type="checkbox"/> A. SURFACE IMPOUNDMENT			<input type="checkbox"/> A. INCINERATION	<input checked="" type="checkbox"/> A. BUILDINGS ON SITE
<input type="checkbox"/> B. PILES			<input type="checkbox"/> B. UNDERGROUND INJECTION	
<input type="checkbox"/> C. DRUMS, ABOVE GROUND			<input type="checkbox"/> C. CHEMICAL/PHYSICAL	
<input type="checkbox"/> D. TANK, ABOVE GROUND			<input type="checkbox"/> D. BIOLOGICAL	
<input type="checkbox"/> E. TANK, BELOW GROUND			<input type="checkbox"/> E. WASTE OIL PROCESSING	
<input type="checkbox"/> F. LANDFILL			<input type="checkbox"/> F. SOLVENT RECOVERY	
<input type="checkbox"/> G. LANDFARM			<input type="checkbox"/> G. OTHER RECYCLING/RECOVERY	
<input type="checkbox"/> H. OPEN DUMP			<input checked="" type="checkbox"/> H. OTHER N/A (Specify)	
<input checked="" type="checkbox"/> I. OTHER N/A (Specify)				06 AREA OF SITE 3 (Acres)

07 COMMENTS

Reportedly, hazardous waste is not disposed or generated on site.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

N/A ☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

N/A

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☐ NO
02 COMMENTS

N/A

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis reports)

PA DER Preliminary Assessment for Southern Die Casters, February 6, 1986.
NUS FIT 3 Site Investigation TDD No. F3-8701-03, Sample Analyses and site visit.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE PA 02 SITE NUMBER 1995

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY
(Check as applicable)

SURFACE WELL
COMMUNITY A. ☐ B. ☒
NON-COMMUNITY C. ☐ D. ☐

02 STATUS

ENDANGERED AFFECTED MONITORED
A. ☐ B. ☐ C. ☐
D. ☐ E. ☒ F. ☐

03 DISTANCE TO SITE

A. 1 (mi)
B. on site (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☒ B. DRINKING (Other sources available)
COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available)
☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available)
☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER 9,316

03 DISTANCE TO NEAREST DRINKING WATER WELL on site (mi)

04 DEPTH TO GROUNDWATER

approx. 3 to 62 (ft)

05 DIRECTION OF GROUNDWATER FLOW

unknown

06 DEPTH TO AQUIFER OF CONCERN

approx. 3 to 62 (ft)

07 POTENTIAL YIELD OF AQUIFER

unknown (gpd)

08 SOLE SOURCE AQUIFER

☐ YES ☒ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

Wells are cased through the overburden and weathered zone than constructed as open holes to their total depth. Depth of public supply wells range between 180 and 600 feet.

10 RECHARGE AREA

☒ YES COMMENTS
☐ NO

11 DISCHARGE AREA

☐ YES COMMENTS
☒ NO

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION DRINKING WATER SOURCE
☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES
☐ C. COMMERCIAL, INDUSTRIAL
☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:

Unnamed tributary to Deer Creek
Deer Creek

AFFECTED

DISTANCE TO SITE

400 feet to 3,800 (mi)
0.75 (mi)
(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE

A. 1,750
NO. OF PERSONS

TWO (2) MILES OF SITE

B. 5,095
NO. OF PERSONS

THREE (3) MILES OF SITE

C. 9,316
NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION

400 feet (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE

1,340

04 DISTANCE TO NEAREST OFF-SITE BUILDING

400 feet (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

Population within the vicinity of the site is rural, the nearest town, Shrewsbury (pop.-1) is located 1 mile northwest of the site.

ORIGINAL
(Rev)POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE PA 02 SITE NUMBER 1995

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☒ A. SOLID
☐ B. POWDER, FINES
☐ C. SLUDGE
☐ D. OTHER _____
(Specify: _____)
- ☐ E. SLURRY
☒ F. LIQUID
☐ G. GAS

02 WASTE QUANTITY AT SITE
(Measures of waste quantities
must be independent)

TONS _____
CUBIC YARDS unknown
NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
☐ B. CORROSIVE
☐ C. RADIOACTIVE
☒ D. PERSISTENT
- ☐ E. SOLUBLE
☐ F. INFECTIOUS
☐ G. FLAMMABLE
☐ H. IGNITABLE
- ☒ I. HIGHLY VOLATILE
☐ J. EXPLOSIVE
☐ K. REACTIVE
☐ L. INCOMPATIBLE
☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS	unknown	N/A	identified in groundwater and/or on-site soils
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	unknown	N/A	identified in groundwater an/or on-site soils

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/ DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	trichloroethene	79-01-6	identified in groundwater	20	ug/l
SOL	1,1,1-trichloroethane	71-55-5		190	ug/l
SOL	1,1-dichloroethene	75-35-4		43	ug/l
SOL	benzene	71-43-2		7	ug/kg
SOL	chlorobenzene	108-90-7		6	ug/kg
SOL	toluene	108-88-3		7	ug/kg
SOL	styrene	100-42-5		4	ug/kg
MES	lead	7439-92-1		21	ug/l
MES	copper	7440-50-8		2630	ug/l
MES	cadmium	7440-43-9		14	ug/kg
MES	cobalt	7440-48-4		49	mg/kg

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references e.g. state files, sample analysis reports)

NUS Site Inspection sample analyses 2/11/87



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
PA 1995

II. ON-SITE GENERATOR

01 NAME N/A		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE	

III. OFF-SITE GENERATOR(S)

01 NAME N/A		02 D+B NUMBER		01 NAME N/A		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		05 CITY	06 STATE	07 ZIP CODE	
01 NAME N/A		02 D+B NUMBER		01 NAME N/A		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		05 CITY	06 STATE	07 ZIP CODE	

IV. TRANSPORTER(S)

01 NAME N/A		02 D+B NUMBER		01 NAME N/A		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		05 CITY	06 STATE	07 ZIP CODE	
01 NAME N/A		02 D+B NUMBER		01 NAME N/A		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		05 CITY	06 STATE	07 ZIP CODE	

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

PA DER Preliminary Assessment for Southern Die Casters, February 6, 1986.
NUS FIT 3 Site Investigation TDD No. F3-8701-03, Sample Analyses and site visit.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
PA 1995

II. PAST RESPONSE ACTIVITIES

01 <input type="checkbox"/> A. WATER SUPPLY CLOSED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> D. SPILLED MATERIAL REMOVED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> F. WASTE REPACKAGED 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> H. ON SITE BURIAL 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> L. ENCAPSULATION 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> N. CUTOFF WALLS 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> O. EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> P. CUTOFF TRENCHES/SUMP 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION N/A	02 DATE _____	03 AGENCY _____



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
PA 1995

II. CURRENT OWNER(S)

PARENT COMPANY (If applicable)

01 NAME Vernon Caldwell	02 D+B NUMBER	08 NAME N/A	09 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.) unknown	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
01 NAME N/A	02 D+B NUMBER	08 NAME N/A	09 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
01 NAME N/A	02 D+B NUMBER	08 NAME N/A	09 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
01 NAME N/A	02 D+B NUMBER	08 NAME N/A	09 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME unknown	02 D+B NUMBER	01 NAME N/A	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
01 NAME N/A	02 D+B NUMBER	01 NAME N/A	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
01 NAME N/A	02 D+B NUMBER	01 NAME N/A	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

PA DER Preliminary Assessment for Southern Die Casters, February 6, 1986.
NUS FIT 3 Site Investigation TDD No. F3-8701-03, Sample Analysis and site visit.

ORIGINAL
(Rev)

**POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION**

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	1995

II. CURRENT OPERATOR (Provide if different from owner)				OPERATOR'S PARENT COMPANY (If applicable)			
01 NAME Southern Die Casters		02 D+B NUMBER		10 NAME N/A		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.) Box 158		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY Shrewsbury	06 STATE PA	07 ZIP CODE 17361		14 CITY	15 STATE	16 ZIP CODE	
08 YEARS OF OPERATION		09 NAME OF OWNER					
III. PREVIOUS OPERATOR(S) (List most recent first, provide only if different from owner)				PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)			
01 NAME N/A		02 D+B NUMBER		10 NAME N/A		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		14 CITY	15 STATE	16 ZIP CODE	
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					
01 NAME N/A		02 D+B NUMBER		10 NAME N/A		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		14 CITY	15 STATE	16 ZIP CODE	
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					
01 NAME N/A		02 D+B NUMBER		10 NAME N/A		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		14 CITY	15 STATE	16 ZIP CODE	
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					
IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)							
PA DER Preliminary Assessment for Southern Die Casters, February 6, 1986; NUS FIT 3 Site Investigation TDD No. F3-8701-03, Sample Analyses and site visit.							



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
PA 1995

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-8} - 10^{-9}$ cm/sec ☐ B. $10^{-4} - 10^{-8}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK

25 (ft)

04 DEPTH OF CONTAMINATED SOIL ZONE

unknown (ft)

05 SOIL pH

unknown

06 NET PRECIPITATION

7

(in)

07 ONE YEAR 24 HOUR RAINFALL

2.5

(in)

08 SLOPE

5

%

DIRECTION OF SITE SLOPE

North

TERRAIN AVERAGE SLOPE

8

%

09 FLOOD POTENTIAL

N/A

SITE IS IN YEAR FLOODPLAIN

10

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

N/A

ESTUARINE

OTHER

A. (mi)

B. (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

N/A

(mi)

ENDANGERED SPECIES:

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL

RESIDENTIAL AREAS, NATIONAL/STATE PARKS,
FORESTS, OR WILDLIFE RESERVES

AGRICULTURAL LANDS
PRIME AG LAND AG LAND

A. adjacent (mi)

B. N/A (mi)

C. (mi) D. adjacent (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located in a small industrial park consisting of 3 industries. The industrial park is bordered to the west by Route 83 and, beyond that, a small housing development. Land use to the east, north, and south is agricultural.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

PA DER Preliminary Assessment for Southern Die Casters, February 6, 1986.
NUS FIT 3 Site Investigation TDD No. F3-8701-03, Sample Analyses and site visit.

ORIGINAL
(Rev)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE PA	02 SITE NUMBER 1995
----------------	------------------------

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	5	Organics-	
SURFACE WATER		PEI Associates	
WASTE		Inorganics-	
AIR		Ebasco-Hittman	
RUNOFF			
SPILL			
SOIL	8		
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
HNU	No readings above background were recorded
mini-alert	No readings above background were recorded

IV. PHOTOGRAPHS AND MAPS

01 TYPE <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> AERIAL	02 IN CUSTODY OF <u>US EPA</u> <small>(Name of organization or individual)</small>
03 MAPS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	04 LOCATION OF MAPS <u>NUS FIT 3 Site Inspection Report, TDD No. F3-8701-03</u>

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VI. SOURCES OF INFORMATION (See specific references, e.g., state files, sample analysis, reports)

PA DER Preliminary Assessment for Southern Die Casters, February 6, 1986.
NUS FIT 3 Site Investigation TDD No. F3-8701-03, Sample Analyses and site visit.



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I IDENTIFICATION

01 STATE 02 SITE NUMBER
PA 1995

II PAST RESPONSE ACTIVITIES (Continued)

01 <input type="checkbox"/> R. BARRIER WALLS CONSTRUCTED 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> S. CAPPING/COVERING 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> T. BULK TANKAGE REPAIRED 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> U. GROUT CURTAIN CONSTRUCTED 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> V. BOTTOM SEALED 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> W. GAS CONTROL 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> X. FIRE CONTROL 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> Y. LEACHATE TREATMENT 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> Z. AREA EVACUATED 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> 1. ACCESS TO SITE RESTRICTED 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> 2. POPULATION RELOCATED 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> 3. OTHER REMEDIAL ACTIVITIES 04 DESCRIPTION	N/A	02 DATE _____	03 AGENCY _____

III SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

PA DER Preliminary Assessment for Southern Die Casters, February 6, 1986.

NUS FIT 3 Site Investigation TDD No. F3-8701-03, Sample Analyses and site visit.

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F3-41



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION

01 STATE PA	02 SITE NUMBER 1995
----------------	------------------------

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

N/A

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

PA DER Preliminary Assessment for Southern Die Casters, February 6, 1986.
NUS FIT 3 Site Investigation TDD No. F3-8701-03, Sample Analyses and site visit.

SECTION 6

6.0 REFERENCES FOR SECTIONS 1.0 THROUGH 5.0

1. Ayers, Ronald, President of Southern Die Casters, with Michael Snyder, NUS FIT 3. Telecon. June 8, 1987.
2. Pennsylvania Department of Environmental Resources. Preliminary Assessment of Southern Die Casters. February 6, 1986.
3. NUS Corporation, FIT 3. Site inspection; site visit. TDD No. F3-8701-03, February 11, 1987.
4. United States Geological Survey. Glen Rock, Pennsylvania, 7.5 Minute Series. Topographic Map. 1954, photorevised 1968 and 1973.
5. Ayres, Ronald, President of Southern Die Casters, with Elizabeth Coughlin, NUS FIT 3. Telecon. October 14, 1987.
6. Meyers, John, Superintendent of Public Works for Shrewsbury Township, with Michael Snyder, NUS FIT 3. Telecon. June 9, 1987.
7. Sharb, Robert, Railroad Borough, with Michael Snyder, NUS FIT 3. Telecon. June 9, 1987.
8. Rehmeier, Wilbur, Office Secretary for New Freedom Borough, with Michael Snyder, NUS FIT 3. Telecon. June 8, 1987.
9. Pennsylvania Department of Environmental Resources. Title 25 Rules and Regulations, Part I. Subpart C. Protection of National Resource Article II, Water Resources Chapter 93, Water Quality Standards. October 8, 1979.
10. Pennsylvania Department of Environmental Resources, Bureau of Topographic and Geologic Survey. Groundwater Resources of Central and Southern York County, Pennsylvania. Water Resource Report 42, 1977.
11. United States Department of Agriculture, Soil Conservation Service. Soil Survey of York County, Pennsylvania. Issued May 1963.

12. National Oceanographic and Atmospheric Administration. Climatography of the United States. Local Climatological Data. Harrisburg, Pennsylvania. 1984.
13. Rand McNally. Commercial Reference Map and Guide. Pennsylvania. 1983.
14. Kulp, Charles J., United States Department of Interior, Fish and Wildlife Service, to Garth Glenn, NUS FIT 3. Correspondence. April 8, 1987.

ORIGINAL
GROUP

SECTION 7

7.0 LABORATORY DATA

7.1 Sample Data Summary

The attached data summary contains only compounds which were identified as detected in at least one sample. The complete list of compounds analyzed for, their results, and the associated detection limits are located as an appendix. Results for tentatively identified compounds appear following the organic data section of this report.

The following codes are used in the data summary to indicate the confidence in the laboratory results:

CODES RELATING TO IDENTIFICATION

(confidence concerning presence or absence of compounds):

- U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.
- (NO CODE) = Confirmed identification.
- B = Not detected substantially above the level reported in laboratory or field blanks.
- R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.
- N = Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION

(can be used for both positive results and sample quantitation limits):

- J = Analyte present. Reported value may not be accurate or precise.
- K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- UJ = Not detected, quantitation limit may be inaccurate or imprecise.
- UL = Not detected, quantitation limit is probably higher.

OTHER CODES

- Q = No analytical result.

TDD Number F3-8701-03
 EPA Number PA-1995

SAMPLE DATA SUMMARY
 TARGET COMPOUNDS

☒ Organic ☐ Inorganic

Site Name SOUTHERN DIE CASTERS
 Date of Sample 11 FEBRUARY 1987

Compounds Detected

Sample Number	Sample Description and Location	Phase	Units	METHYLENE CHLORIDE	ACETONE	1,1-DICHLOROETHENE	1,1,1-TRI-CHLOROETHANE	TRICHLOROETHENE	BENZENE	TOLUENE	CHLORO BENZENE	STYRENE	DIETHYL PHTHALATE	DI-N-BUTYL PHTHALATE	BUTYLBENZYL PHTHALATE	BIS-(2-ETHYLHEXYL) PHTHALATE	Remarks
CF697	1A: Septic Field	SOL	ug/kg	20 ⁴⁵	65 ⁴⁵								417 ⁴⁵		918 ⁴⁵		
CF698	1B: Septic Field	SOL	ug/kg	19 ⁴⁵	49 ⁴⁵							101 ⁴⁵	319 ⁴⁵	96 ⁴⁵			
CF699	1C: Septic Field	SOL	ug/kg	19 ⁴⁵	33 ⁴⁵		12 ^J						291 ⁴⁵				
CF454	Drainage Swale 2A: So. of Septic Field	SOL	ug/kg	12 ⁴⁵	10 ⁴⁵								346 ⁴⁵				
CF455	Drainage Swale 2B: So. of Septic Field	SOL	ug/kg	11 ⁴⁵	7 ⁴⁵								730 ⁴⁵				
CF456	3: Old Drum Storage	SOL	ug/kg	19 ⁴⁵					7	7	6	J 2	276 ⁴⁵				
CF500	4A: Old Vegetation Kill	SOL	ug/kg	18 ⁴⁵					J 4	J 4		J 4	283 ⁴⁵		924 ⁴⁵		
CF501	4B: Old Vegetation Kill	SOL	ug/kg	31 ⁴⁵								J 2	314 ⁴⁵		920 ⁴⁵		
CF503	SOUTHERN DIE CASTERS Well	AQ	ug/l		7 ⁴⁵												INDUSTRIAL WELL
CF504	Amp 1: Amping Well	AQ	ug/l		5 ^J	43	190	20									INDUSTRIAL WELL
CF506	HW1: Private Resident	AQ	ug/l		7 ⁴⁵								2 ⁴⁵				DRINKING WELL
CF507	HW2: Private Resident Well	AQ	ug/l														DRINKING WELL
CF508	HW3: Private Residence	AQ	ug/l		5 ⁴⁵								3 ⁴⁵				DRINKING WELL
CF509	BLANK	AQ	ug/l	3 ⁴⁵	9 ⁴⁵												

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

TDD Number F3-8701-03
EPA Number PA-1995

SAMPLE DATA SUMMARY
TARGET COMPOUNDS

☐ Organic ☐ Inorganic

Site Name SOUTHERN DIE CASTERS
Date of Sample 11 FEBRUARY 1987

Sample Number	Sample Description and Location	Phase	Units	Compounds Detected												Remarks	
				METHYLENE CHLORIDE	ACETONE	1,1-DICHLOROETHENE	1,1,1-TRI CHLOROETHANE	TRICHLOROETHENE	BENZENE	TOLUENE	CHLORO BENZENE	STYRENE	DIETHYL PHTHALATE	DI-N-BUTYL PHTHALATE	BUTYL BENZYL PHTHALATE		BIS-(2-ETHYLHEXYL) PHTHALATE
CF510	BLANK	SOL	ug/kg	4.5	30.5												
																	</

NOTE: For a review of this data and non-target, tentatively identified compounds, please see the Analytical Quality Assurance section of this report.

TDD Number F3-8701-03
 EPA Number PA-1995

SAMPLE DATA SUMMARY
 TARGET COMPOUNDS

☐ Organic ☒ Inorganic

Site Name Southern Die Casters
 Date of Sample 11 FEBRUARY 1987

Sample Number	Sample Description and Location	Phase	Units	Compounds Detected													Remarks
				Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	
MCE 111	1A: Septic Field	SOL	mg/kg	19400		40	1.8	6.6	772	18	15	22	33900	8.9	1570		
MCE 112	1B: Septic Field	SOL	mg/kg	10700		18	1.3	8.9	503	16	26	38	51600	7.1	340		
MCE 113	1C: Septic Field	SOL	mg/kg	12100		14	2.0	8.8	500	12	40	29	57600	6.5	435		
MCE 114	2A: Drainage Swale S. of Septic Field	SOL	mg/kg	19600		40		6.8	794	36	21	29	38200	17	1840		
MCE 115	2B: Drainage Swale S. of Septic Field	SOL	mg/kg	29900		8.9	29	2.3	8.2	316	37	29	42	41100	11	2720	
MCE 116	3: Old Drum Storage	SOL	mg/kg	19100		60	1.2	8.3	716	19	35	26	32800	12	2310		
MCE 117	4A: Old Vegetation Kill	SOL	mg/kg	51400		23	84	2.4	14	553	78	49	77	76800	10	17100	
MCE 118	4B: Old Vegetation Kill	SOL	mg/kg	36600		10	80	1.9	13	253	50	33	81	63200	9.9	11400	
MCE 120	Southern Die Casters Well	AQ	ug/l			86			36000			2630	337	21	12500		INDUSTRIAL WELL
MCE 121	AMP 1: AMP Inc. Well	AQ	ug/l			15	2.0		7380			147	295	19	3440		INDUSTRIAL WELL
MCE 123	HW1: Private Resident	AQ	ug/l			28			5820				170		3060		DRINKING WELL
MCE 124	Private Resident Well	AQ	ug/l			12			5360			80	230	5.3	1850		DRINKING WELL
MCE 125	Private Residence	AQ	ug/l			15	2.0	7.0	9850			146	140		5240		DRINKING WELL
MCE 126	Blank	AQ	ug/l				2.0		99								

♦ Denotes results of questionable qualitative significance based upon quality assurance review of data.

TDD Number F3-8701-03
 EPA Number PA-1995

SAMPLE DATA SUMMARY
 TARGET COMPOUNDS

☐ Organic ☒ Inorganic

Site Name Southern Dye Casters
 Date of Sample 11 FEBRUARY 1987

Sample Number	Sample Description and Location	Phase	Units	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Cyanide	Percent Solids (%)	TIN	Remarks
MCE111	1A: Septic Field	SOL	mg/kg	351		43 36	631		73		26	102			82.5		
MCE112	1B: Septic Field	SOL	mg/kg	96		43 40	538		78		16	43 31			77.5		
MCE113	1C: Septic Field	SOL	mg/kg	129		43 44	597		62		22	43 34			73.5		
MCE114	Drainage Swale 2A: S. of Septic Field	SOL	mg/kg	422		43 52	793		230		18	43			79.0		
MCE115	Drainage Swale 2B: S. of Septic Field	SOL	mg/kg	338	0.1	43 46	475		99		22	50			83.0	43	
MCE116	3: Old Drum Storage	SOL	mg/kg	593		43 45	638		258		12	53			84.0	43 31	
MCE117	4A: Old Vegetation Kill	SOL	mg/kg	1350			104	375	160		114	177			83.0	43 60	
MCE118	4B: Old Vegetation Kill	SOL	mg/kg	910			94	633	65		56	181			81.0	43 40	
MCE120	Southern Dye SDC: Casters Well	AQ	ug/l	29	0.5	43 25	2330		65800			100					INDUSTRIAL WELL
MCE121	AMP 1: AMP, Inc. well	AQ	ug/l	17	0.2	43	985		3470			43 44					INDUSTRIAL WELL
MCE123	HW1: Private, Resident	AQ	ug/l	6.0	0.2	43	1070		6440			43 12					DRINKING WELL
MCE124	Private, HW2: Resident well	AQ	ug/l	15			710		4400			43 45					DRINKING WELL
MCE125	Private HW3: Residence	AQ	ug/l	6.0	0.2	43 22	656		2620			43 40					DRINKING WELL
MCE126	Blank	AQ	ug/l	3.0			110		388			12					

◆ Denotes results of questionable qualitative significance based upon quality assurance review of data.

7.2 Quality Assurance Review

7.2.1 Organic Data: Lab Case 6828

7.2.1.1 Summary

Eight solid samples and five aqueous samples were analyzed through the EPA Contract Laboratory Program (CLP) for volatile, acid, base-neutral, and pesticide compounds. Included in the sample set were two field blanks, one soil and one aqueous, and a duplicate pair.

The laboratory data have been fully reviewed to determine the usability of results according to the National Guidelines (areas examined in detail are listed in the Support Documentation appendix). Although there were several problems noted during review of laboratory data, most did not result in major impacts on the overall data quality/usability. Overall, detection capability was acceptable for most compounds, as demonstrated by meeting criteria for holding times, tuning, instrument performance, surrogate recoveries, and minimum response factors. Blank contamination affected mostly low-level samples results for four compounds, and quantitative accuracy and imprecision were acceptable for most results. Precision was noted for the field duplicate results.

In general, the principal areas of concern were identified as false positive results due to blank contamination, field duplicate imprecision, high matrix spike recoveries for two compounds, and several compound results that were flagged as inaccurate because they were below the limit of quantitation. The following sections explain these areas of concern and their associated impact on the sample results.

7.2.1.2 Qualifiers

- All positive results for methylene chloride, acetone, di-n-butyl phthalate, and diethyl phthalate have been flagged (UJ) on the data summary. There is evidence to doubt the presence of these compounds, based upon the fact that the concentrations reported were not substantially above the levels detected in laboratory and field blanks.
- The levels of bis(2-ethylhexyl) phthalate in samples CF697, CF500, and CF501 have been flagged (H). There is evidence to doubt the presence of these compounds, based upon the fact that this phthalate is a very common laboratory contaminant.

- The presence of 1,1,1-trichloroethane is quantitatively imprecise in sample CF699 and has been flagged (J) due to possible inhomogeneity in field duplicate.
- The presence of 1,1-dichloroethene in sample CF504 has been flagged (J) due to high matrix spike recovery (see The Support Documentation appendix pages IIIa and IIIb).
- The presence of butylbenzyl phthalate is questionable in sample CF698 and has been flagged (J) because it was detected in one field duplicate but not the other.
- In general, very few tentatively identified compounds were detected, except for those associated with laboratory blank contamination. Tentatively identified compound results are summarized in a table immediately following this report.

7.2.1.3 Supporting Data

The Support Documentation appendix to this report documents the above findings associated with blank contamination, field duplicate results, and matrix spike results. The text of this report has been formatted to address only those issues affecting the application of the data to the subject investigation. (Issues pertaining to laboratory contractual compliance are addressed on a separate summary directed to the deputy project officer.)

Report prepared by James Chambers _____ Date: October 16, 1987
(215) 687-9510

Report reviewed by Russell Sloboda _____ Date: October 16, 1987
(215) 687-9510

SAMPLE DATA SUMMARY: ORGANIC TENTATIVELY IDENTIFIED COMPOUNDS

1 of 3

SAMPLE NUMBER	ANALYSIS FRACTION (VOA/BNA)	ESTIMATED CONCENTRATION		QUALIFIER CODE	COMPOUND NAME
		VALUE	UNITS		
CF454	VOA	3	ug/kg	Tot, unk	Unknowns (1)
	BNA	2000		SUS	2,4-DIMETHYL-3-HEPTANONE
		5000		Tot, unk	Unknowns (2)
CF455	VOA				No TIC Found
	BNA	2000	ug/kg	Tot, unk	Unknowns (1)
CF456	VOA				No TIC Found
	BNA	2000	ug/kg		3-HEPTANONE 2,4 DIMETHYL
	BNA	5000	ug/kg	Tot, unk	Unknowns (1)
CF500	VOA				No TIC Found
	BNA	1000	ug/kg		3-HEPTANONE, 2,4, DIMETHYL
	BNA	2000	ug/kg	Tot, unk	Unknown (1)
CF501	VOA				No TIC Found
	BNA	1000	ug/kg		3-HEPTANONE 2,4 DIMETHYL
	BNA	2000	ug/kg	Tot, unk	Unknown (1)
CF503	VOA				No TIC Found
	BNA				No TIC Found
CF504	VOA				No TIC Found
	BNA				No TIC Found

DEFINITIONS OF QUALIFIER CODES:

SUS = SUSPECTED FALSE POSITIVE RESULT: Compound is either a common laboratory contaminant, or else a possible reaction byproduct (artifact) attributable to the chemical reagents used for sample preparation and analysis. This result is suspect even though this compound was not found in any associated blanks.

UNK = UNKNOWN COMPOUND: Library search result unreasonable or of very low matching quality.

TOT = TOTAL CONCENTRATION REPORTED: Represents the sum of several compounds detected all belonging to the same chemical class.

ISO = OR ISOMER: Compound identification is not selective for this isomer only. This result may instead represent the presence of a similar compound comprised of the same atoms bonded together in a different arrangement or substitution pattern.

SAMPLE DATA SUMMARY: ORGANIC TENTATIVELY IDENTIFIED COMPOUNDS

2 of 3

SAMPLE NUMBER	ANALYSIS FRACTION (VOA/BNA)	ESTIMATED CONCENTRATION		QUALIFIER CODE	COMPOUND NAME
		VALUE	UNITS		
CF506	VOA	10	ug/L		Unknown (1)
↓	BNA				No TIC Found
CF507	VOA	20	ug/L	tot	Unknown (2)
↓	↓	4	ug/L		Hexane, 3 Methyl
↓	BNA				No TIC Found
CF508	VOA	45	ug/L	tot	SAT. Hydrocarbons (3)
↓	↓	150	ug/L	tot	Unknown (6)
↓	BNA				No TIC Found
CF509	VOA	100	ug/L	tot	Unknown (4)
↓	BNA				No TIC Found
CF510	VOA				No TIC Found
↓	BNA				No TIC Found
CF697	VOA				No TIC Found
↓	BNA	2000	ug/kg		3-Heptanone, 2,4-Dimethyl
↓	BNA	2000	ug/kg	UNK	Unknown (1)
CF698	VOA				No TIC Found
↓	BNA	1000	ug/kg		3-Heptanone, 2,4-Dimethyl
↓					

DEFINITIONS OF QUALIFIER CODES:

SUS = SUSPECTED FALSE POSITIVE RESULT: Compound is either a common laboratory contaminant, or else a possible reaction byproduct (artifact) attributable to the chemical reagents used for sample preparation and analysis. This result is suspect even though this compound was not found in any associated blanks.

UNK = UNKNOWN COMPOUND: Library search result unreasonable or of very low matching quality.

TOT = TOTAL CONCENTRATION REPORTED: Represents the sum of several compounds detected all belonging to the same chemical class.

ISO = OR ISOMER: Compound identification is not selective for this isomer only. This result may instead represent the presence of a similar compound comprised of the same atoms bonded together in a different arrangement or substitution pattern.

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DEFINITIONS OF QUALIFIER CODES:

ISO = OR ISOMER: Compound identification is not selective for this isomer only. This result may instead represent the presence of a similar compound comprised of the same atoms bonded together in a different arrangement or substitution pattern.

7.2.2 Inorganic Data: Lab Case 6828

7.2.2.1 Summary

Eight solid samples and five unfiltered aqueous samples were analyzed through the EPA Contract Laboratory Program (CLP) for metals and cyanide. Included in this sample were one field blank for aqueous samples. Solid field blanks were omitted.

The laboratory data have been fully reviewed to determine the usability of results according to the National Guidelines. (The Support Documentation appendix examines the listed areas in detail.) Several problems were noted in the laboratory data review. Most did not result in major impacts on the overall data quality/usability. The detection capability was acceptable for most elements, as demonstrated by meeting criteria for holding times, matrix spikes, post-digestion spikes, and instrument detection limits. Blank contamination affected mostly low-level results for several metals; the only major concern was the results for mercury. Minor problems were noted with quantitative precision in positive results for barium and zinc, resulting in the flagging of several results as estimated (J) on the data summary. The bias low detection limits for other compounds also displayed minor problems.

There is the possibility that zinc might be in sample MCE124 at 45 ug/l. However, this value is questioned by the blank. (It should be noted that the laboratory forgot to report this result.)

In general, the principal areas of concern were identified as blank contamination, matrix spike recoveries for seven elements, duplicate precision for cadmium matrix spike due to spectral interference, spike recovery for antimony, biased low detection limits for tin in water, base or low matrix spike recoveries, disagreement with the several dilution analyses for beryllium and selenium, poor detection sensitivity for mercury, and poor accuracy of the lowest calibration standard for several elements.

7.2.2.2 Qualifiers

There is evidence to doubt the presence of several inorganic compounds. The presence of the following metals is qualitatively questionable. The fact that the concentration reported were not substantially above the levels detected in laboratory or field blanks. These results have been flagged (UJ) on the data summary and are listed below:

Elements	Sample Numbers
arsenic	MCE111 through MCE114, AND MCE118 through MCE126
barium	Aqueous samples MCE112 and MCE113, and MCE121 through MCE125
beryllium	All positive results
cadmium	MCE111 through MCE116 and MCE125
calcium	MCE126
cobalt	All soil samples, except MCE117
copper	MCE111 through MCE116 and MCE124
lead	MCE111 through MCE113, and MCE124
manganese	MCE123, and MCE125
mercury	MCE115, MCE121, MCE123, and MCE125
nickel	MCE111 through MCE116, MCE120 and MCE125
sodium	All soil sample results
zinc	MCE112, MCE113, MCE121, MCE123, and MCE125
tin	MCE115 through MCE118

These metals were detected in laboratory and/or field blanks at sufficient levels to deem them questionable. The Support Documentation appendix to this report contains a tabulation of all laboratory method blanks and field blanks results (see Support Documentation appendix, pages 2, 3, and 4, for blank analysis results).

- Positive results for zinc in soil samples have been flagged as estimated (J) due to spectral interference and poor precision, yielding low recovery of the matrix spike of sample MCE116 (see the Support Documentation appendix, page 9, for matrix duplicate results).
- Positive results for arsenic in soil samples have been flagged as estimated (J) due to sample digestion loss. Values could be biased low, due to low recoveries in the matrix spike of sample MCE118 (see the Support Documentation appendix, page 5, for spike recoveries).
- Positive results for barium in water samples have been flagged as estimated (J) due to poor precision of duplicates in sample MCE124 (see the Support Documentation appendix, page 9A, for duplicates).
- Positive results for beryllium in sample MCE120 and MCE118 are considered to have a possible sensitivity problem described in the serial dilutions. Both samples exhibit a sensitivity problem, showing a 183 percent recovery in the serial dilution, and values have been flagged (J). It is suspected that the low-level beryllium results observed in the samples and blanks from this case are due to noise rather than the presence of beryllium (see the Support Documentation appendix, pages 15a and 15b).
- The positive results for selenium, in samples MCE111, MCE114, MCE115, MCE116, and MCE117 can be considered bias low, thus, there is the possibility that the sample value may have been suppressed.
- The detection limits for tin are considered biased low for water samples based upon low matrix spike recovery for sample MCE124.
- Mercury detection limits in soil sample MCE115 and water samples MCE121, MCE123, and MCE125 show inadequate sensitivity yielding the calibration blank at 0.003 absorbance equal to the low standard 0.2 ug/l. The sample results which were questioned are believed to be due to noise rather than the presence of mercury. (See the Support Documentation appendix, pages 12 and 13, for sample run.)

7.2.2.3 Supporting Data

The Support Documentation appendix to this report documents the above findings regarding blank analyses, matrix spikes, duplicate analyses, serial dilutions, duplicate spike recoveries, and detection limits. The text of this report has been formatted to address those issues affecting the application of the data to the subject investigation.

Report prepared by James Chambers _____ Date: October 16, 1987
(215) 687-9510

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ORIGINAL
(Red)

SECTION 8

8.0 TOXICOLOGICAL EVALUATION

8.1 Summary

No adverse health effects are anticipated at the reported levels and the conditions of exposure expected on this site.

Notable concentrations of trichloroethylene (TCE), 1,1,1-trichloroethane (1,1,1-TCEA) and 1,1-dichloroethylene (1,1-DCE) were reported in the AMP, Incorporated well, located adjacent to the Southern Die Casters (SDC) facility. This well is not currently used for drinking purposes; however, it is used for hand washing and sanitary purposes. The concentrations of TCE, 1,1,1-TCEA, and 1,1-DCE reported in the AMP well are not expected to pose serious threats, assuming the well is not used as a potable source. If water from this well were to be consumed, an excess carcinogenic risk of about 7.3×10^{-4} due to TCE and 1,1-DCE may be anticipated. Earlier sampling of the groundwater on the AMP site revealed 1,1,1-TCEA (up to 1,420 ppb) and lesser concentrations of other organics; 16 ppb of 1,1,1-TCEA was previously measured in SDC's groundwater well. The possible source of the groundwater volatile contamination cannot be definitively determined from available information, as on-site soil samples (SDC) revealed only a trace (12 ppb) of 1,1,1-TCEA in one soil sample, as well as traces (up to 7 ppb) of a few additional organics in two other soil samples.

Inorganic analysis revealed measurable levels of lead, copper, iron, and sodium in the SDC and/or the AMP wells. These levels are not expected to pose any health threats, as these wells are not used as a potable source.

8.2 Support Data

8.2.1 Organics

A sample from the AMP, Incorporated well, located directly east of the Southern Die Casters facility, revealed the presence of solvents such as TCE (20 ug/l), 1,1,1-TCEA (190 ug/l), and 1,1-DCE (43 ug/l). It cannot be definitively determined from the limited data whether the occurrence of these contaminants is associated with the SDC site, as only one auger sample (septic field) on site revealed a low level of 1,1,1-TCEA (12 ug/kg). No TCE or 1,1-DCE were measured in SDC samples; a sample from the SDC well, located west of the facility, revealed no reliable evidence of organic contamination.

TCE and 1,1,1-TCEA are widely used in industry as degreasers and solvents. TCE has also been used in dry cleaning operations. 1,1-DCE is used as a chemical intermediate, particularly as a monomer in the production of plastics.³ These volatiles are mobile in the environment and can readily leach into groundwater. Once present in enclosed groundwater, these contaminants can remain for extended periods of time.

The concentration of TCE and 1,1-DCE reported in the AMP well exceed their respective Maximum Contaminant Levels (MCLs) of 5 and 7 ug/l, while the reported concentration of 1,1,1-TCEA approaches its proposed MCL of 200 ug/l.⁴ An MCL Goal of zero has also been promulgated for TCE due to its status as a probable human carcinogen (group B2). MCL Goals are nonenforceable health goals set at a level which will result in no known or anticipated adverse effects and which allows an adequate margin of safety.⁴ If water from the AMP well were to be used as a potable source, an excess cancer risk of about 7.3×10^{-4} due to TCE and 1,1-DCE (1 case for every 1,400 persons so exposed) may result.⁶ As previously noted, this well is presently used for non-potable purposes only. A less apparent source of exposure to the volatile contaminants in this well water may be through inhalation of vapors released from the water during its use for hand washing, etc. The exact extent of this risk cannot be precisely quantified due to the limited information available; however, it is expected to be of a low order due to the relatively low concentrations of volatiles reported in this water.

Low levels of benzene (up to 7 ug/kg), chlorobenzene (6 ug/kg), toluene (up to 7 ug/kg), and styrene (up to 4 ug/kg) were reported in soil samples obtained from the old drum storage and old vegetation kill areas. Also, a low level of 1,1,1-TCEA was measured (12 ug/kg) in the septic field. This sample was the only SDC sample that revealed 1,1,1-TCEA, which had reportedly been used by SDC for parts washing (see section 1.3). Reported soil organic concentrations are not expected to cause any serious hazards and may not be at sufficiently high levels to impact groundwater.